

1 - 13. (cancelled)

14. (withdrawn) A method for analyzing a papermaking process, in which several electrochemical quantities are measured from at least one liquid flow and fingerprints according to various process situations are determined, to which the fingerprints obtained in a normal process situation are compared and the differences in the output variables created by an essential change are determined, characterized in that the electrochemical measurements are carried out independently of each other using at least 4 - 15 electrode series, each comprising at least three electrodes, one common bias-electrode for all series and, in addition, at least one odor measurement is used from the gases that are emitted from the said liquid flow into the gas space over the free liquid surface.

15. (withdrawn) A method according to Claim 14, characterized in that the odor measurements are made in at least two temperature ranges.

16. (withdrawn) A method according to Claim 14, characterized in that the measurements are made from at least one liquid flow containing fibers and the measurement channels are arranged to be sufficiently spacious so that liquid containing fibers can pass through them without causing a danger of blockage.

17. (withdrawn) A method according to Claim 14, characterized in that there are six electrochemical electrode series and their outlet channels are connected together in pairs and these pairs are connected in turn through a flow meter to a common outlet line.

18. (currently amended) An electrochemical, ~~i.e.~~ polarographic/galvanostatic sensor for analyzing a liquid, in which sensor there is a measurement cell, through which the liquid is led and in which there are several working electrodes of different material, and reference-electrodes, and a current-supplying counter-electrodes, and [[a]] pre-amplifiers to

amplify ~~[[a]]~~ weak measurement signals, characterized in that the electrodes are arranged ~~[[in]]~~ into 4 – 15 electrode series, each series including at least ~~[[a]]~~ one of the working electrodes, ~~[[a]]~~ one of the reference electrodes, ~~and a~~ one of the counter-electrodes, and ~~there~~ a shared fourth electrode which is a common bias-electrode ~~for all~~ completing each electrode series, ~~which is a fourth electrode in each series, and there are 4 – 15 electrode series, each series having a~~ including one of the pre-amplifiers located proximate the electrodes of the series ~~with a minimized connection distance.~~

19. (currently amended) A sensor according to Claim 18, characterized in that the electrode series are placed in measurements channels branching out radially of an intake channel and ~~[[a]]~~ said common bias electrode in the center of the intake channel.

20. (currently amended) A sensor according to Claim 18, characterized in that the material of at least one electrode ~~belongs to the~~ is chosen from a group consisting of platinum, gold, silver, ~~iron-Fe₃~~ Fe³⁺, ~~iron-Fe₂~~ Fe²⁺, stainless steel, molybdenum, zinc, titanium, cadmium, copper, glass, electrically-conductive plastic, and ceramics.

21. (original) A sensor according to Claim 18, characterized in that the pre-amplifier connected to each series is located in the space between the electrode series in the immediate vicinity of each electrode series.

22. (currently amended) A sensor according to Claim 19 ~~[[21]]~~, characterized in that the sensor includes an electrode cover covering the radial channels on at least one side, to which the electrodes are attached to extending into the said radial channels and on the other side extending to a special electronic circuit card, in which the said pre-amplifiers are installed.

23. (original) A sensor according to Claim 22, characterized in that a protectively ground cylinder, which extends over at least one-third of the depth of the electrode cover, is fitted around the electrodes on the circuit card side.

24. (currently amended) A sensor according to Claims 18, characterized in that the ~~sensor pipes~~ electrode series are arranged in such a way that liquid remains around the ~~sensors~~ electrodes during a shutdown.

25. (currently amended) A sensor according to Claim 19, characterized in that the radial channels have a diameter of 0.3 – 3 cm, and each electrode protrudes into one of the radial channels in such a way that the speed of flow increases substantially at it.

26. (currently amended) A sensor according to Claim 19, characterized in that the common bias electrode in the center of the intake channel is includes a high-speed temperature sensor.